European Institute of Knowledge & Innovation

Journal of Contemporary Philosophical and Anthropological Studies (JCPAS) ISSN: 2977-5507

Opinion

Legality of Employing Artificial Intelligence for Writing Academic Papers in Education

Konstantinos T. Kotsis [1,*]

[1] Department of Primary Education, University of Ioannina, Greece
* Correspondence: kkotsis@uoi.gr

https://doi.org/10.59652/jcpas.v3i1.375

Abstract: Including artificial intelligence (AI) in academic writing has spurred a critical review of its ethical and legal ramifications in learning environments. As companies embrace AI tools like ChatGPT, questions about authorship, intellectual property, and academic integrity have become central concerns that need careful examination, as institutions do. This paper explores the changing definition of AI and its ability to execute tasks usually connected with human intelligence, generating serious ques-tions about originality and ethical standards in academic work. The conversation emphasizes the need for educational institutions to create explicit structures that handle the complexity of AI-assisted writing preserving academic integrity and encouraging creative ideas. Underlined in the paper are ethical conundrums created by AI-generated content, especially concerning openness, accuracy, and bias potential. It questions who owns AI-generated works and how conventional ideas of creative agency must be reassessed because of these developments, so challenging the muddy waters of authorship and intellectual property rights. Beyond only legal concerns, the implications of AI's presence in academic writing force a review of pedagogical approaches and the possible effects on critical thinking and independent research skills among students. In the end, this work supports a sensible strategy that welcomes AI's transforming power while protecting the fundamental values of academic integrity and rigor. It asks teachers, lawyers, and legislators to work together to negotiate AI's complex legal terrain in academia so that the educational experience stays strong and morally sound for the next generations.

Keywords: artificial intelligence; academic integrity; authorship; intellectual property; ethical considerations

Received: December 3, 2024
Accepted: January 20, 2025
Published: January 28, 2025

1. Introduction

The development of artificial intelligence (AI) has drastically changed the field of academic writing and raised ethical and legal concerns about its consequences. The rapid spread of AI technologies is forcing educational institutions all around to include these creative tools in their courses of study and research approaches. This integration emphasizes the need to closely examine how such technologies affect academic environments' authorship, originality, and academic integrity. Current discussions on the legality of using AI for writing academic papers expose a complicated junction of copyright law, educational policies, and sometimes poorly defined ethical guidelines. Teachers, students, and attorneys among other stakeholders have to negotiate this changing terrain to determine whether content created by AI should be labeled as original work or derivative. Addressing these several issues depends on knowing current systems controlling intellectual property rights and plagiarism. It is impossible to overestimate the need to create thorough policies guaranteeing AI use transparency since maintaining educational standards depends on encouraging responsible academic research. The discussion on the function of AI has to take into account how it affects the learning process itself and wonder if depending too much on these technologies could unintentionally compromise independent research abilities and critical thinking. Therefore, a careful analysis of these elements will help to clarify whether the use of AI in academic writing can be judged legal or may violate educational values, thus influencing future academic debate.

Including cutting-edge computational technologies in academic writing marks a radical

change in the field of education, where AI serves both as a tool and a topic of research. In this regard, AI can be defined as systems able to complete activities usually requiring human intelligence, including data analysis, language understanding, and writing. This changing definition begs important issues on authorship, originality, and academic ethical standards. As the debate of cryptocurrencies and blockchain within Islamic finance (Rabbani et al., 2020) shows, AI presents difficulties regarding Sharia compliance and regulatory constraints even while it can help in producing content and improving research efficiency. The consequences go beyond legal ones since the reliance on AI forces a review of conventional academic methods and motivates educational institutions to create frameworks allowing these technological developments while preserving academic integrity. Navigating the complexity of AI in educational environments thus depends on knowing its definition and impact on academic writing.

Including AI tools in the classroom has seen notable development that helps to shape different pedagogical strategies and improve student involvement in learning activities. Applications of AI range widely from adaptive learning systems that dynamically personalize instruction depending on individual student performance measures and learning styles to other tools. Very important for helping students with their academic writing needs are language processing tools, which promote improved writing skills and comprehension. The present scene presents a remarkable range of tools that enable teachers to enhance the learning process and encourage academic integrity among their students. Still, as these technologies keep exploding, questions about how AI might be used in educational settings are starting to surface. These issues mostly center on fairness in academic work, originality, and authoring. As observed, the ubiquitous nature of algorithms along with their capacity to bring bias highlights a critical need for clear rules and ethical guidelines inside educational environments (Koshiyama et al., 2024). Theoretical research indicates that AI could transform education by providing customized learning experiences, empirical studies are still lacking on the wider consequences of these technologies, especially concerning employment prospects and the evolution of employment-related skills among graduates (Comunale & Manera, 2024). This multifarious terrain emphasizes the vital equilibrium that has to be kept between ensuring complete compliance with legal and ethical norms in academia and properly using AI for educational improvement. Ongoing research and communication will be crucial as teachers and institutions negotiate this changing terrain to solve urgent problems and maximize the advantages of AI tools in the classroom.

The fast spread of AI technologies in academic writing calls for careful analysis of the legal ramifications related to their application in several settings. Many issues concerning authorship, intellectual property, and academic integrity surface as educational institutions struggle with including AI tools like ChatGPT in their courses and research processes; all of these are vital focal points that need to be addressed. For instance, the validity of AI-generated text begs serious questions regarding plagiarism and the originality usually demanded in academic work. Establishing a universal legal framework becomes more difficult in this regard since different academic disciplines may have different criteria and expectations about originality and authorship. Researchers have to negotiate the complicated interaction between conventional ethical rules and the advanced powers of AI, which might generate sophisticated language outputs that might quite resemble human writing. As underlined in (Veach & Abualkibash, 2023), future research directions have to carefully consider the consequences of applying AI not only as a tool but also as a co-author or major contributor in scholarly environments. Scholars have to participate in debates defining precise legal frameworks so that teachers and researchers may properly use these tools. In the end, this endeavor is crucial for safeguarding academic integrity and supporting creative teaching strategies using AI to forward knowledge and education in many spheres.

2. Legal Framework Surrounding Academic Integrity

Navigating the complexity presented by AI technologies in education – especially as these technologies develop and get more sophisticated – requires a strong legal framework surrounding academic integrity. Considering both the possible advantages these technologies offer and the hazards they create to the educational environment, institutions have to create thorough policies that aggressively address the ethical consequences of using AI in academic writing. Integrating AI tools like ChatGPT, for example, begs several relevant issues about authorship, originality, and plagiarism in educational settings that call for a careful investigation of how these components interact with conventional ideas of academic integrity.

As observed, the use of AI can indeed help to improve learning through tailored resources and personalized feedback; yet, it presents major difficulties in preserving academic honesty and confidence in scholarly work (Sarkar & Kumar, 2024). The results that support the creation of legal measures to guarantee academic integrity in the face of AI proliferation underline this duality even more by pointing out the need for both rules as soft law instruments and strong national legislation to handle possible violations (Teremetskyi et al., 2024). Given these difficulties, institutions have to create explicit, thorough policies defining appropriate uses of AI and technology in educational environments and underline the idea that technological developments should complement rather than replace personal academic effort and critical thinking. Through thorough development and ongoing updating of these legal systems, educational institutions can better protect the integrity of academic work and create an innovative and enriching learning environment among the developments of the digital age (Sales de Aguiar, 2024). These rules not only safeguard teachers and students but also help to foster an ethical scholarship and a culture of responsibility that is absolutely necessary for the ongoing reputation of academic institutions.

It is becoming more and more clear that ethical behavior in higher education depends on this legal structure around academic integrity. Particularly in response to issues presented by remote learning during the COVID-19 epidemic, several universities have created thorough plans to handle academic misbehavior (Khan, 2024). For example, the University of Bristol has put in place a research integrity and ethics system stressing cooperation with the academic community to guarantee adherence to ethical norms and legislative requirements (Whitman & Tallents, 2010). Universities are urged in the Muslim world to embrace more comprehensive approaches to integrity instead of only preventing plagiarism, with an eye toward the whole picture. The creation of specialized offices – like the suggested Office of Academic Integrity in Australia – helps to standardize investigative procedures and guard against conflicts of interest inside institutions (Hall, 2006). Though problems still exist in matching ethical practices across teaching and research, the Office of Ombudsman for Academic Ethics has been essential in Lithuania in institutionalizing academic integrity (Tauginienė, 2016). These initiatives draw attention to the need for a strong legal system to support academic integrity in several learning environments.

Within the framework of academic integrity, plagiarism rules, and institutional policies, plagiarism laws direct the moral application of AI technologies in academic publications. Reevaluating current policies is desperately needed as educational institutions use AI tools more and more in their pedagogical activities to handle the complex problems and ethical conundrums these developments create. Often lacking clarity on the acceptable use of AI for academic writing, current laws run afoul of long-standing academic standards of originality and authorship. This uncertainty can lead to circumstances whereby teachers and students unintentionally break accepted standards by using AI technologies, so compromising their academic integrity and reputation. The enthusiasm about AI's ability to improve learning – as shown in recent research – must be counterbalanced with a careful approach to guarantee fair and equitable use in educational environments (Ghimire, 2024). Teachers have to have constant conversations about how AI might affect student work and its place in the classroom. With an emphasis on digital higher education, case studies must guide policy development, enabling institutions to adopt rules protecting academic integrity and using technological innovations for pedagogical advancement (Sousa et al., 2022). Developing thorough policies can help to create an environment where the advantages of AI are embraced while yet maintaining the moral standards of ethical research that are fundamental to academic society.

Copyright law's junction with AI-generated content creates a convoluted legal environment that questions conventional ideas of authorship and ownership. Determining who retains rights over such content becomes a critical issue in educational environments where originality and creativity are vital as AI systems help to create written works. When the creator lacks human authorship – as in the case of AI-generated outputs – the idea that copyright shields the expression of ideas rather than the ideas themselves complicates the matter even more. This begs relevant issues on the definition of intellectual property and the legal acceptance of non-human creators.

In this regard, the relevance of Responsible Leadership emphasizes the moral consequences of work produced by AI, so motivating thought on responsibility in the ownership and ethical use of such outputs. As academics and legislators struggle with these issues, the RESPEND model from accounting education can guide a strategic and disciplined approach to foster moral behavior among students and future leaders, so ensuring that they

comprehend the consequences of their work in a fast-changing technological scene. Thus, a sophisticated knowledge of copyright law is indispensable to negotiate the consequences of AI in academic writing, safeguarding intellectual property while promoting invention and guaranteeing that ethical standards are maintained in learning environments. The future of content creation will be shaped by this changing conversation on AI and copyright rights, which calls for constant analysis and legislative adaptation to fit this new reality.

Establishing consistent policies that define ethical use in scholarly writing becomes essential as academic institutions struggle with the fast acceptance of AI tools. The authenticity and originality of student work are seriously called into question by the misuse of AI, including using ChatGPT to evade academic integrity (Hutson, 2022). This scenario has made academics emphasize the need of institutions to use thorough policies defining acceptable methods for the use of AI in educational projects. The dynamic character of technology and the continuous improvement of AI capacity demand that these rules are not fixed but rather flexible and changeable to fit fresh advances in the field. According to a study including postgraduate students, there is a modest ethical commitment towards AI application, so highlighting a possible discrepancy between awareness and practice (Hegazy et al., 2024). These results imply that institutions have to give ethical training and policy reviews that incorporate unambiguous rules on the use of AI top priority, so strengthening the values of integrity and authenticity fundamental to the academic community (Febriyanti et al., 2024). Institutions have to make investments in educational programs that let students learn about these policies and promote a better knowledge of the ethical consequences of AI. This helps institutions establish a situation whereby the integration of AI improves the educational process and preserves the fundamental values of academic integrity. Using proactive development and communication of these policies, one can reduce the risks related to AI use and inspire ethical student scholarship.

3. Ethical Considerations in AI-Assisted Writing

It becomes necessary to examine the ethical consequences of educational institutions using AI tools in academic writing as they are included more and more. Dependency on AI chatbots raises serious questions about authorship, originality, and fair assessment of student work. For example, even if AI can offer individualized support in drafting texts, it begs ethical concerns about whether such help promotes real learning or reliance on automated systems, which might so hinder the growth of students' critical thinking and writing abilities. Even though AI technologies such as ChatGPT can improve accessibility and efficiency, they also provide difficulties for which institutions have to negotiate to prevent unethical use, especially in tests (Sabzalieva & Valentini, 2023). Students running AI-generated content as their marks run a serious ethical conundrum since it compromises the integrity of the academic work.

The ethical questions raised by AI-assisted writing span authorship, accuracy, privacy, and the possibility of bias. Researchers underline the need for openness in revealing AI-generated content as well as the need for ethical references to maintain academic integrity (Ersöz & Engin, 2024; Delgado et al., 2024). The use of AI in delicate subjects like school shootings begs questions regarding the reinforcement of negative narratives and the psychological damage it causes, so stressing the need for improved ethical frameworks that give vulnerable groups priority (Osipov, 2024).

Including AI in scientific writing offers chances for improved efficiency as well as difficulties in keeping strict criteria of clarity and detail (Cooperman & Brandão, 2023). Establishing thorough rules addressing these ethical quandaries and promoting responsible AI use depends on a cooperative approach including academics, businesses, and legislators (Jain et al., 2020).

Including AI in educational environments calls for a strong framework to direct its application so that it enhances rather than compromises academic integrity. Clear ethical guidelines should be part of this structure to inspire students to interact with AI in a way that advances creativity and learning instead of passivity.

Establishing these ethical rules will eventually protect the educational goals while encouraging creativity in academic writing, so ensuring that the advantages of AI can be obtained without compromising the basic standards of scholarship and integrity in education (Awad & Moosa, 2024).

The development of AI in academia begs serious issues about authorship and intellectual property rights, undermining conventional ideas of creative agency based on human effort and personal contribution. Whether in the form of research papers, articles, or other scholarly

works, the ownership of AI systems – which are increasingly used to create academic content – becomes hazy and difficult; if an AI generates a paper, who owns it? Is the institution that applied the AI, the user who guided it, the programmer who developed it? This conundrum reflects more general society debates on intellectual property, especially with relation to fair training methods that take into account the consequences of using copyrighted materials in AI training without appropriate attribution (Torrance & Tomlinson, 2023). The move toward AI-generated content calls for a significant reevaluation of human-centric ideas of authorship, in which case human authors' responsibilities, ethical obligations, and creative contributions have to be reinterpreted because of AI's capabilities. It is abundantly evident as we negotiate this unexplored ground that the junction of AI and authorship calls for a multifarious investigation of new paradigms honoring innovation while safeguarding the rights of people who have always impacted and shaped creative output.

4. The Impact of AI on Student Learning and Critical Thinking Skills

Including AI tools in curricula changes student experiences and drastically questions conventional wisdom about critical thinking. AI can offer tailored learning experiences catered to individual student needs and simplify some tasks, such as grading and instantaneous feedback; it raises serious questions regarding academic integrity and the degree of student interaction with their material. Recent studies indicate that students who use generative AI for writing help may have more help overcoming writer's block, so enabling their creative processes in a way never possible (Söğüt, 2024). This can result in more efficiency and creativity in first drafts, depending too much on AI-generated content may unintentionally reduce the necessary critical analysis needed for sophisticated academic writing since students may choose speed and convenience over the intellectual rigor needed to interact closely with their subjects.

AI integration into the classroom has clearly had a major positive effect on student learning and critical thinking ability in many different settings. Studies show that by allowing tailored learning experiences, encouraging participation, and supporting group projects, AI tools improve critical thinking. Studies show, for example, that students in English literature classes who used AI showed statistically significant increases in critical thinking over those who did not use AI tools (Liu & Wang, 2024). Though its efficacy depends on students' capacity to formulate exact questions and critically evaluate AI-generated content, AI helps in extending ideas and offers deeper insights (Lawasi et al., 2024). Environments driven by AI have been found to improve digital literacy skills among students and foster intellectual autonomy and creativity (Sako, 2024). All things considered, the efficient use of AI in education strengthens critical thinking and gets students ready for the next academic and career challenges (Capinding & Dumayas, 2024; Mayasari et al., 2024).

As debates on academic misconduct and possibly compromising significant learning outcomes (Söğüt, 2024) underline, developing ethical guidelines and AI literacy among students is a priority. Maintaining academic integrity depends on students' ability to tell original thoughts from AI-generated recommendations. Therefore, educational stakeholders have to strike a balance between the advantages of AI and the need to develop strong critical thinking skills in students so that they may make good use of these technologies and participate actively and deliberately in their academic activities. Preparing students for a time when AI is progressively ubiquitous in many spheres of life and employment depends on this equilibrium.

Since the consequences of AI are far-reaching, integrating this technology into education has caused great ethical questions that call for examination from teachers and institutions. As AI systems help grade and provide writing support, issues about authorship and academic integrity become more urgent. Dependency on AI-generated content can blur the line between original work and automated help, compromising academic integrity and so compromising the fundamental values of the educational system.

The unequal access to AI technologies begs serious questions about equity; not all students or institutions have the same means, so aggravating current educational disparities. Underprivileged students could lack access to sophisticated tools enjoyed by their peers, creating an unfair playing field and disadvantaging some of them. Institutions have to negotiate this complexity by weighing the creative possibilities of AI against their dedication to creating a fair and moral society. Teachers must strike a balance between appreciating the benefits of AI – personalized learning experiences and improved engagement – and being

alert about the hazards involved in using it. As underlined in debates relevant to digital image access and retrieval, clear rules and ethical frameworks are essential to properly negotiate these changing obstacles and guarantee that the use of AI corresponds with academic values and policies. Teachers and institutions have to cooperate to build a responsible framework that solves these moral conundrums and guarantees the integrity of the academic process through fair educational policies for every student.

5. Analysis of Legal Cases Involving AI-Generated Content in Academia

Historical background is crucial since precedents set important legal standards that affect modern ideas of copyright and authorship in this fast-changing environment. For example, the emergence of generative AI, especially in advanced tools like ChatGPT, has sparked fierce arguments about intellectual property rights that have scholars, teachers, and legal experts examining current systems more closely than ever. Especially, the observations in the current literature that underline both the possible advantages, such as increased creativity and efficiency, and challenges, including plagiarism and the diluting of original thought, posed by these developing technologies, underlined the implications of AI's capabilities (Budhwar et al., 2023). Understanding past decisions, rationales, and nuances will help to provide a more complete examination of the ethical and legal consequences as educational institutions progressively use AI writing tools and include them in pedagogical practices. Teachers, managers, and students all depend on this knowledge since it will eventually shape their interactions with AI technologies in educational settings. A strong awareness of these precedents will help legislators to create suitable rules that properly balance innovation with academic integrity, so ensuring that using AI in writing and scholarship creates an environment of learning while protecting intellectual property rights (Aydın & Karaarslan, 2023).

Legal challenges involving AI-generated content in academia create difficult problems that complicate the integration of AI in scholarly writing even more. The possibility of plagiarism, copyright infringement, and academic integrity violations becomes clearer as institutions struggle with the consequences of AI-assisted technologies. A critical analysis of recent case law highlights the lack of clarity in liability for damage caused by AI-generated material, so underlining the debate on these concerns (Wang et al., 2023). Ethical issues of authorial responsibility highlight the need for openness in AI-generated outputs, which directly affect the effectiveness of the pedagogical relationship and integrity of academic work. Navigating these difficulties depends on strong legal frameworks, which also foster an environment that simultaneously supports innovation while protecting the fundamental values of academia, so reiterating that the legal environment of AI in education remains fraught with uncertainty.

Different institutions have responded differently to include AI in academic writing; many of them aim to strike a good balance between control and innovation in this fast-changing terrain. While 63% of universities actively encourage the use of generative AI among their students and staff, specific advice on its application remains mostly focused on writing tasks, according to a thorough analysis of policies from 116 high-research activity institutions in the United States (McDonald et al., 2024). This unequal focus raises serious questions about the wider consequences of AI adoption, especially in sectors outside of writing like STEM fields needing different skills and ethical considerations. Highlighted in many debates on the materiality of these technologies is the fact that, although discussions concerning ethics and AI's effect on Diversity, Equity, and Inclusion are present in over half of the policies examined, they often lack depth and fail to fully address the environmental and labor-related consequences of AI systems that have emerged.

This policy development oversight points to an urgent need for a more all-encompassing strategy stressing AI's importance in scholarly writing and acknowledging its broad consequences in all academic domains. Institutions can build a framework that promotes creativity and respects the values of equity and responsible scholarship by making sure that AI's integration into academic writing is matched with sustainable and ethical teaching strategies. This could therefore result in better social responsibility and educational results, so arming students to interact with AI technologies ethically and critically in their future employment.

6. Comparative Analysis of International Approaches to AI Legality in Education

As technology develops at an unparalleled speed, the changing terrain of AI in education calls for a thorough analysis of many international legal systems controlling its application. The consequences for academic integrity, ethical standards, and policy development are significant and broad as nations choose different paths. Different ethical rules and regulatory systems define the complex terrain revealed by international approaches to AI legality in education. Examining K–12 education ethics policies reveals a shared focus on values including openness together with special concerns including pedagogical appropriateness and children's rights (Adams et al., 2021). Notwithstanding difficulties in general adoption, the push for thorough legislation – best shown by the AI Act (AIA) – aims to create strong governance structures reflecting democratic values and human rights in Europe, thus influencing global norms. Comparative studies of 22 nations show a variety of governance models ranging from self-regulation to market-based approaches with public responsibility emerging as a crucial, cross-cutting issue (Djeffal et al., 2022). A review of 57 policy papers from 24 nations reveals shared themes including safeguarding personal data and governance systems, so underlining the need for coherent ethical frameworks in AI policy (Saheb & Saheb, 2024).

These results show generally the need for harmonized international standards to properly handle the ethical and legal issues raised by AI in education (Cath, 2018). The more laissez-faire attitude seen in some U.S. educational institutions, which may prioritize fast innovation and technological advancement over strict regulatory measures, contrasts sharply with the emphasis on rigorous data privacy regulations and high ethical standards placed by the European Union (Berendt et al., 2017). This difference in approaches begs important issues about responsibility and governance; while some countries actively address urgent issues like student privacy and the fair distribution of vital AI resources, others ignore the more general socioeconomic consequences, possibly widening already existing educational inequality. As underlined in (Driessens & Pischetola, 2024), the issues of assessment integrity and the legality of data usage are progressively becoming more important, reflecting a rising trend of universities struggling with the material and epistemological challenges presented by AI technologies in their assessment systems and teaching approaches. The formulation of strong and fair AI policies in educational environments depends on a better knowledge of these worldwide points of view. Analyzing these different legal frameworks and their consequences helps stakeholders develop a balanced approach that takes innovation and regulation into account, so enabling a more inclusive and effective learning environment that fully uses AI while lowering its risks.

7. Discussion

Including AI into academic writing creates difficult ethical and legal questions for which institutions have to be careful to guarantee responsible use. As noted in recent studies, the fast development of generative AI (genAI) has caused academic institutions to examine their policies about assessment integrity, data legality, and accuracy of AI outputs. This analysis exposes notable gaps in addressing the gen AI's material consequences. Particularly with regard to its environmental impact and exploitative corporate models, it begs important issues regarding responsibility and the function of AI in the educational process (Driessens & Pischetola, 2024). The promise of AI technologies such as ChatGPT presents possible pedagogical advantages and could improve the learning process by means of tailored feedback and support, the risks of use demand strict rules to guarantee academic integrity and stop academic dishonesty (Veach & Abualkibash, 2023). Therefore, as educational environments progressively incorporate AI, stakeholders – including educators, managers, and legislators – must find a way that carefully balances innovation with compliance, so promoting environments that support ethical research practices. This strategy acknowledges the limits of technology tools in maintaining academic rigor and authenticity while yet appreciating AI's great capacity. Institutions must aggressively address these issues in this changing environment to promote cooperation and communication that will help them to properly leverage AI, so enhancing the educational process without compromising the fundamental values of research. Academic institutions can thus confirm their dedication to maintaining the integrity of their academic missions in a time marked by technological development.

Investigating AI's place in academic writing begs significant and complex issues

regarding its legality and consequences for scholarly integrity in the fast-changing academic scene of today. While generative AI tools like ChatGPT can greatly improve the writing process by supporting the generation of ideas, refining language, and enhancing general clarity, their use must strictly follow ethical and legal standards to maintain academic rigor, recent studies underline. For example, (Veach & Abualkibash, 2023) emphasizes the twin possibilities of AI as both a great collaborator and a cause of conflict in academic environments, where issues of originality and authorship remain vital points of dispute. The integration of AI has to be given great thought since it presents both chances for innovation and questions conventional ideas of authorship. This thus calls for a thorough discussion on its legal status and ethical use in educational settings, stressing the need of creating policies and frameworks that might guide teachers and students in responsibly using AI technologies while preserving the integrity of scholarly work.

Stakeholders in developing successful policies and best practices for using AI in academic writing must give thorough frameworks addressing the complexity of AI deployment top priority. Ethical consequences also must be given top priority. This means working together among teachers, technologists, and lawyers to develop rules controlling AI use and supporting conditions fit for learning and creativity. Indeed, including several points of view is essential since it enables a more complete knowledge of the several difficulties presented by AI in educational environments. As underlined in (Callier & Callier, 2018), the pressing need for a strong governance structure for AI technologies implies that responsibility systems have to be created to reduce hazards connected with their application in the field of education. These governance systems ought to incorporate well defined criteria for assessing AI instruments and their effect on scholarly integrity. Policies should also stress the need of helping teachers in adjusting to technological changes so that they are ready to lead their students across the complexity of using AI responsibly based on the observations from. Professional development initiatives can be quite important since they provide chances for training that enable staff members and faculty to grasp the capabilities and restrictions of AI tools. In the end, such a multifarious approach will not only improve educational integrity but also build a framework that welcomes the possibilities of AI to enrich academic research while guaranteeing that ethical standards are kept intact and that students' learning experiences are protected in the changing technological scene.

8. Conclusions

Including AI into the classroom marks a radical change that greatly redefines pedagogical approaches and evaluation procedures. As AI technologies develop quickly, educational systems use these advanced tools more and more to improve individualized learning experiences, increase student engagement, and enable more general knowledge resource access. By means of personalizing tools made possible by AI, teachers can customize courses to fit particular learning styles and paces, so striving to raise student retention rates and outcomes. This customized approach supports different students – including those with different degrees of ability – so fostering inclusiveness in learning settings. But this development cannot be disregarded since it begs difficult ethical issues about authorship, originality, and academic integrity. The possibility of AI-generated content in scholarly writing could obfuscate the foundation of academic rigor – traditional markers of scholarship and independent thought. Institutions thus have to deal with the consequences of AI-assisted education as well as changing student and faculty expectations of academic rigor and integrity. Universities have to create strong systems that guarantee responsible AI use across many fields, prioritizing innovation and safeguarding fundamental academic values as they get ready for this future environment. Institutions also have to negotiate the complex legal terrain of these technologies, including problems with data privacy and copyright. Through proactive addressing of these issues, academics can maximize the potential of AI and protect the integrity of the educational process for the next generations. In the end, the road ahead will call for a sensible strategy that welcomes technical development without sacrificing fundamental intellectual values.

Funding: This research received no external funding.

Conflicts of Interest: The author declares no conflict of interest.

References

Adams, C., Pente, P., Lemermeyer, G., & Rockwell, G. (2021). Artificial Intelligence Ethics Guidelines for K-12 Education: A Review of the Global Landscape. In I. Roll, D. McNamara, S. Sosnovsky, R. Luckin, V. Dimitrova (eds) *Artificial Intelligence in Education. AIED 2021. Lecture Notes in Computer Science*, vol 12749. Springer. https://doi.org/10.1007/978-3-030-78270-2_4

Awad, W., & Moosa, J. (2023). Implications of AI Chatbots in Education: Challenges and Solution. *Journal of Statistics Applications & Probability, 13*(2), 611-622. https://doi.org/10.18576/jsap/130203

Aydın, Ö., & Karaarslan, E. (2023). Is ChatGPT leading generative AI? What is beyond expectations?. *Academic Platform Journal of Engineering and Smart Systems, 11*(3), 118-134. https://doi.org/10.21541/apjess.1293702

Berendt, B., Littlejohn, A., Kern, P., Mitros, P., Shacklock, X., & Blakemore, M. (2017). *Big data for monitoring educational systems.* Publications Office of the European Union, Luxembourg. https://doi.org/10.2766/38557

Budhwar, P., Chowdhury, S., Wood, G., Aguinis, H., Bamber, G. J., Beltran, J. R. …Varma, A. (2023). Human resource management in the age of generative artificial intelligence: Perspectives and research directions on ChatGPT. *Human Resource Management Journal, 33*(3), 606-659. https://doi.org/10.1111/1748-8583.12524

Callier, M., & Callier, H. (2018). Blame It on the Machine: A Socio-Legal Analysis of Liability in an AI World. Blame it on the ma-chine: A socio-legal analysis of liability in an AI world. *Washington Journal of Law, Technology & Arts, 14*(1), 49-72. https://digitalcommons.law.uw.edu/cgi/viewcontent.cgi?article=1289&context=wjlta

Capinding, A. T., & Dumayas, F. T. (2024). Transformative Pedagogy in the Digital Age: Unraveling the Impact of Artificial Intelligence on Higher Education Students. *Problems of Education in the 21st Century, 82*(5), 630-657. https://doi.org/10.33225/pec/24.82.630

Cath, C. (2018). Governing artificial intelligence: ethical, legal and technical opportunities and challenges. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, 376*(2133), 20180080. https://doi.org/10.1098/rsta.2018.0080

Comunale, M., & Manera, A. (2024). The Economic Impacts and the Regulation of AI: A Review of the Academic Literature and Policy Actions. *IMF Working Papers, 2024*(065). International Monetary Fund. https://doi.org/10.5089/9798400268588.001

Cooperman, S. R., & Brandão, R. A. (2024). AI assistance with scientific writing: Possibilities, pitfalls, and ethical considerations. *Foot & Ankle Surgery: Techniques, Reports & Cases, 4*(1), 100350. https://doi.org/10.1016/j.fastrc.2023.100350

Delgado, V., Sales, K., & Abreu, V. (2024). Ethical reflections on the use of Generative Artificial Intelligence in the academic sphere: writing and authorship. In *Anais do V Workshop sobre as Implicações da Computação na Sociedade* (pp. 153-160). Porto Alegre: SBC. https://doi.org/10.5753/wics.2024.3170

Djeffal, C., Siewert, M. B., & Wurster, S. (2022). Role of the state and responsibility in governing artificial intelligence: a comparative analysis of AI strategies. *Journal of European Public Policy, 29*(11), 1799–1821. https://doi.org/10.1080/13501763.2022.2094987

Driessens, O., & Pischetola, M. (2024). Danish university policies on generative AI: Problems, assumptions and sustainability blind spots. *MedieKultur: Journal of Media and Communication Research, 40*(76), 31–52. https://doi.org/10.7146/mk.v40i76.143595

Ersöz, A. R., & Engin, M. (2024). Exploring Ethical Dilemmas in the Use of Artificial Intelligence in Academic Writing: Perspectives of Researchers. *Journal of Uludag University Faculty of Education, 37*(3), 1190-1208. https://doi.org/10.19171/uefad.1514323

Febriyanti, S. N., Anggraini, M., & Fitria, B. F. M. (2024). Digital Discourse on the ChatGPT Controversy: Reflections on the Controversial Use of Artificial Intelligence Among Indonesian Youth. *Journal of Humanities and Social Sciences Studies, 6*(9), 01–07. https://doi.org/10.32996/jhsss.2024.6.9.1

Ghimire, A. (2024). Generative AI in Education From the Perspective of Students, Educators, and Administrators. All Graduate Theses and Dissertations, Fall 2023 to Present. 124. https://doi.org/10.26076/c582-c0bc

Hall, B. M. (2006). Australia needs an office of academic integrity. *Medical Journal of Australia, 185*(11-12), 619-622. https://doi.org/10.5694/j.1326-5377.2006.tb00731.x

Hegazy, A. Z., Gaber, S. A., Alkhateeb, I. A., Alqatam, M. A., Almughyirah, S. M., Mahgoub, Y. M., & Shahat, H. A. (2024). Saudi Postgraduate Students' Ethical Commitment between Awareness and Application of Artificial Intelligence in Scientific Writing. *International Journal of Learning, Teaching and Educational Research, 23*(10), 583-598. https://doi.org/10.26803/ijlter.23.10.28

Hutson M. (2022). Could AI help you to write your next paper?. *Nature, 611*(7934), 192–193. https://doi.org/10.1038/d41586-022-03479-w

Jain, R., Pathak, D., & Chandan, M. (2020). Ethical Considerations in AI: Navigating Bias, Fairness, and Accountability. *Res Militaris, 10*(1), 149-155. https://resmilitaris.net/uploads/paper/29de6d2c59ea5f1db04003827e93a6c7.pdf

Khan, Z. R. (2024). Academic Integrity Training Module for Academic Stakeholders: IEPAR Framework. *Journal of Academic Ethics, 22*(1), 9-31. https://doi.org/10.1007/s10805-024-09517-8

Koshiyama, A., Kazim, E., Treleaven, P., Rai, P., Szpruch, L., Pavey, G.,... & Chatterjee, S. (2024). Towards algorithm auditing: managing legal, ethical and technological risks of AI, ML and associated algorithms. *Royal Society Open Science, 11*(5), 230859. https://doi.org/10.1098/rsos.230859

Lawasi, M. C., Rohman, V. A., & Shoreamanis, M. (2024). The Use of AI in Improving Student's Critical Thinking Skills. *Proceedings Series on Social Sciences & Humanities, 18*, 366–370. https://doi.org/10.30595/pssh.v18i.1279

Liu, W., & Wang, Y. (2024). The Effects of Using AI Tools on Critical Thinking in English Literature Classes Among EFL Learners: An Intervention Study. *European Journal of Education, 59*(4), e12804. https://doi.org/10.1111/ejed.12804

Mayasari, N., Sastraatmadja, A. H. M., Suparman, T., Mutiara, I. I., & Maqfirah, P. A.-V. (2024). Effectiveness of Using Artificial Intelligence Learning Tools and Customized Curriculum on Improving Students' Critical Thinking Skills in Indonesia. *The Eastasouth Journal of Learning and Educations, 2*(02), 111–118. https://doi.org/10.58812/esle.v2i02.302

McDonald, N., Johri, A., Ali, A., & Hingle, A. (2024). Generative Artificial Intelligence in Higher Education: Evidence from an Analysis of Institutional Policies and Guidelines. *ArXiv*. https://doi.org/10.48550/arXiv.2402.01659

Osipov, D. (2024). Ethics of AI Technologies in "Sensitive" Content Creation and Evaluation. School Shooting Cases. *Galactica Media: Journal of Media Studies, 6*(3), 44-65. https://doi.org/10.46539/gmd.v6i3.530

Rabbani, M. R., & Khan, S., & Thalassinos, E. I. (2020). FinTech, Blockchain and Islamic Finance: An Extensive Literature Review. *International Journal of Economics and Business Administration, 8*(2), 65-86. DOI: 10.35808/ijeba/444

Sabzalieva, E., & Valentini, A. (2023). ChatGPT and artificial intelligence in higher education: Quick start guide. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000385146

Saheb, T., & Saheb, T. (2024). Mapping Ethical Artificial Intelligence Policy Landscape: A Mixed Method Analysis. *Science and Engineering Ethics, 30*, 9. https://doi.org/10.1007/s11948-024-00472-6

Sako, T. (2024). Enhancing critical thinking through AI-Assisted collaborative Task-based learning: A case study of prospective teachers in Japan. *Journal of English Language Teaching and Linguistics, 9*(2), 157-170. http://dx.doi.org/10.21462/jeltl.v9i2.1319

Sales de Aguiar, T. R. (2024). ChatGPT: reflections from the UK higher education institutions, accountancy bodies and BIG4s. *Accounting Research Journal, 37*(3), 308 – 329. https://doi.org/10.1108/ARJ-07-2023-0184

Sarkar, S., & Kumar, R. (2024). Mapping the Contours: Utopic and Dystopic Perspectives on the Use of AI in Higher Education. *Canadian Perspectives on Academic Integrity, 7*(4). https://doi.org/10.55016/ojs/cpai.v7i4.78308

Söğüt, S. (2024). Generative Artificial Intelligence in EFL Writing: A pedagogical stance of pre-service teachers and teacher trainers. *Focus on ELT Journal, 6*(1), 58-73. https://focusonelt.com/index.php/foe/article/view/134

Sousa, M. J., Suleman, F., Melé, P. M., & Gómez, J. M. (2021). New Research and Trends in Higher Education. *Education Sciences, 11*(9), 456. https://doi.org/10.3390/educsci11090456

Tauginienė, L. (2016). Embedding academic integrity in public universities. *Journal of academic ethics, 14*, 327-344. https://doi.org/10.1007/s10805-016-9268-4

Teremetskyi, V., Burylo, Y., Zozuliak, O., Koshmanov, M., Polyova, N., & Petruk, O. (2024). Academic Integrity in The Age of Artificial Intelligence: World Trends and Outlook for Ukraine from The Legal Perspective. *Pakistan Journal of Life and Social Sciences, 22*(1), 2020-2029. https://doi.org/10.57239/PJLSS-2024-22.1.00147

Torrance, A. W., & Tomlinson, B. (2023). Training is Everything: Artificial Intelligence, Copyright, and Fair Training. *arXiv*. https://doi.org/10.48550/arXiv.2305.03720

Veach, A., & Abualkibash, M. (2023). Analysing Chatgpt's Potential Through the Lens of Creating Research Papers. *International Journal of Computer Science & Information Technology, 15*(4), 49-65. https://doi.org/10.5121/ijcsit.2023.15405

Wang, C., Liu, S., Yang, H., Guo, J., Wu, Y., & Liu, J. (2023). Ethical considerations of using ChatGPT in health care. *Journal of Medical Internet Research, 25*, e48009. https://doi.org/10.2196/48009

Whitman, B., & Tallents, G. (2010). Development of a Research Integrity and Ethics Framework in a Higher Education Institution: Five Years On. *Research Ethics, 6*(3), 81-85. https://doi.org/10.1177/174701611000600303